

PURCHASE DESCRIPTION

PULSE MODULATOR (2 to 18 GHz)

ML00A-B

- 1.0 GENERAL This procurement requires a wideband, high performance microwave pulse modulator which can be used with many microwave sources, sweepers as well as signal generators, over the frequency range of 2 GHz to 18 GHz.
- 2.0 CLASSIFICATION The pulse modulator described herein shall meet the requirements of MIL-T-28800( ), Type III, Class 5, Style E, Color R for Navy shipboard, submarine, and shore applications with the following exceptions:
- a. The relative humidity requirement is limited to 95% non-condensating.
  - b. The operating and non-operating altitude requirements are not invoked.
  - c. The Electromagnetic Interference requirements of MIL-T-28800( ) are limited to CE01, CE03, CS01, CS02 (0.05 to 100 MHz), CS06, RE01 (back panel search excluded), RE02 (14 kHz to 1 GHz), and RS03.
- 3.0 OPERATIONAL REQUIREMENTS The equipment shall be capable of producing signals within the parameters and accuracies specified herein.
- 3.1 Frequency Characteristics
- 3.1.1 Range: At least 2 GHz to 18 GHz
  - 3.1.2 Insertion Loss: < 10 dB
- 3.2 Pulse Characteristics
- 3.2.1 On/Off Ratio: > 80 dB
  - 3.2.2 PRF: Maximum pulse repetition rate > 5 MHz
  - 3.2.3 Minimum Pulse Width: 50 nsec
  - 3.2.4 Rise/Fall Times: < 10 nsec
  - 3.2.5 Video Feedthrough: < 60 mVp-p
  - 3.2.6 RF Connectors/Impedance: Type N; 50 ohm (input and output)

3.2.7 Pulse Input: > 3 V (On) and < 0.5 V (Off), 50 ohms, normal and compliment inputs

4.0 GENERAL REQUIREMENTS

4.1 Power: 115/230 Vac  $\pm 10\%$ , single phase, 50, 60 or 400 Hz  $\pm 10\%$ , 25 VA maximum

4.2 Dimensions: The total volume shall not exceed 6,555 cm<sup>3</sup> (400 in<sup>3</sup>), maximum height 8.9 cm (3.5 in).

4.3 Weight: The total weight shall not exceed 2.7 kg (6 lbs).

4.4 Calibration Interval: The calibration interval shall be 12 months minimum. The equipment shall be within all accuracy requirements specified herein, with a 72% or greater confidence factor following a calibration interval of 12 months.